AMENDMENTS TO THE CLAIMS

Please amend claims 1, 4, 7-9, 22, 23, and 24.

Please replace the claims with the following listing of the claims.

Listing of the Claims:

The listing of claims will replace all prior versions and listings of claims in the Application:

1. (Currently Amended) A hand-held device for monitoring a patient's blood pressure, comprising:

a ~~removable,~~ hand-held component configured to be held proximal to the patient's skin;

~~an~~ a first optical module operating in a reflective mode and mounted on the hand-held component, the first optical module comprising ~~an~~ a first optical source component configured to generate optical radiation and a first optical sensor configured to detect reflected radiation from the patient and, in response, generate a first set of information when the hand-held component is held proximal to the patient's skin;

a second optical module operating in a reflective mode and mounted on the hand-held component, the second optical module comprising a second optical source component configured to generate optical radiation and a second optical sensor configured to detect reflected radiation from the patient and, in response, generate a second set of information when the hand-held component is held proximal to the patient's skin;

an electrical sensor mounted on the hand-held component and comprising an electrode pair configured to generate a ~~second~~ third set of information when the hand-held component is held proximal to the patient's skin; and

a processing module, mounted in the hand-held component, and configured to receive the first, ~~and~~ second, and third sets of information, the processing module comprising a processor that calculates a first time difference between components of the first set of information and the second set of information and a second time difference between the third set of information and at least one of the first and second sets of information and compares the first and second time differences to a mathematical model to calculate a blood pressure value.

2. (Previously Canceled)

3. (Previously Cancelled)

4. (Currently Amended) The device of claim 1, wherein the electrical sensor is configured to generate a time-dependent electrical waveform in response to ~~the~~ a body-generated electrical signal.

5. (Previously Amended) The device of claim 1, wherein the hand-held component further comprises an analog-to-digital converter connected to the processing module.

6. (Previously Cancelled)

7. (Currently Amended) The device of claim 1, wherein at least one of the first and second optical source components ~~of the optical module~~ further comprises a first optical source component that generates visible radiation, and ~~a second~~ an additional optical source component that generates infrared radiation.

8. (Currently Amended) The device of claim 7, wherein at least one of the first and second optical sensors is a photodiode.

9. (Currently Amended) The device of claim 8, wherein the photodiode is configured to generate a photocurrent after detecting radiation generated by the first optical source component and the ~~second~~ additional optical source component.

10. (Previously Amended) The device of claim 9, wherein the hand-held component further comprises an analog-to-digital converter connected to the processing module and configured to receive and process the photocurrent.

11. (Previously Amended) The device of claim 9, wherein the processing module further comprises firmware that processes the photocurrent to generate a time-dependent optical waveform.

12 - 13. (Previously Canceled)

14. (Previously Amended) The device of claim 1, wherein the processor further comprises computer-readable firmware that processes the first set of information to additionally determine pulse oximetry and heart rate.

15 - 17. (Previously Canceled)

18. (Previously Amended) The device of claim 1, wherein the hand-held component further comprises a serial interface.

19. (Original) The device of claim 18, wherein the serial interface is configured to send information to an external device.

20. (Original) The device of claim 18, wherein the serial interface is configured to accept calibration information.

21. (Previously Canceled)

22. (Currently Amended) A hand-held device for monitoring a patient's blood pressure, comprising:

a ~~removable,~~ hand-held component configured to be positioned proximal to the patient's skin;

a pressure-delivering component configured to apply a pressure to the patient's skin;

~~an~~ a first optical module mounted on the hand-held component comprising ~~an~~ a first optical source component and a first optical sensor configured to generate a first set of information while the pressure is applied to the patient's skin and radiation emitted from the optical source is reflected from the patient's skin and detected by the first optical sensor;

a second optical module mounted on the hand-held component comprising a second optical source component and a second optical sensor configured to generate a second set of information while radiation emitted from the optical source is reflected from the patient's skin and detected by the second optical sensor;

~~an electrical sensor mounted on the hand-held component and comprising an electrode pair configured to generate a second set of information;~~ and

a processing module, mounted in the hand-held component, and configured to receive the first and second sets of information and comprising a processor that calculates

a time difference between components of the first set of information and the second set of information and compares the time difference to a mathematical model to calculate a blood pressure value.

23. (Currently Amended) A method for measuring a blood pressure value from a patient, comprising the steps of:

1) holding a ~~removable,~~ hand-held component proximal to the patient's skin, the ~~removable,~~ hand-held component comprising: i) ~~an~~ a first optical component comprising ~~an~~ a first optical source component configured to emit optical radiation and a first optical sensor configured to detect reflected radiation and, in response, generate a first set of information while the hand-held component is held proximal to the patient's skin; ii) a second optical component comprising a second optical source component configured to emit optical radiation and a second optical sensor configured to detect reflected radiation and, in response, generate a second set of information while the hand-held component is held proximal to the patient's skin; iii) an electrical component comprising an electrode pair configured to generate a ~~second~~ third set of information while the hand-held component is held proximal to the patient's skin; and ~~iii)~~ iv) a processor, comprised by the ~~removable~~ hand-held component, and operating an algorithm ~~that~~ configured to ~~processes both~~ process the first, second, and third sets of information ~~and the second set of information~~;

2) initiating a measurement wherein the first optical component generates the first set of information, the second optical component generates the second set of information, and the electrical component generates the ~~second~~ third set of information; and

3) processing the first, second, and third sets of information ~~and the second set of information~~ with the processor by calculating a first time difference between components of the first and second sets of information, and calculating a second time difference between the ~~second~~ third set of information and at least one of the first and second sets of information, and comparing the first and second time differences to a mathematical model to calculate a blood pressure value.

24. (Currently Amended) A method for analyzing a blood pressure value from a patient, comprising the steps of:

1) holding a ~~removable,~~ hand-held component proximal to the patient's skin, the ~~removable,~~ hand-held component comprising: i) ~~an~~ a first optical component comprising ~~an~~ a first optical source component configured to emit optical radiation and a first optical sensor configured to detect reflected radiation and, in response, generate a first set of information while the hand-held component is held proximal to the patient's skin; ii) a second optical component comprising a second optical source component configured to emit optical radiation and a second optical sensor configured to detect reflected radiation and, in response, generate a second set of information while the hand-held component is held proximal to the patient's skin; iii) an electrical component comprising an electrode pair configured to generate a ~~second~~ third set of information while the hand-held component is held proximal to the patient's skin; and ~~iii)~~ iv) a processor, comprised by the ~~removable~~ hand-held component, and operating an algorithm ~~that~~ configured to process ~~processes~~ the first, second, and third sets of information ~~and the second set of information~~;

2) initiating a measurement wherein the first optical component generates the first set of information, the second optical component generates the second set of information, and the electrical component generates the ~~second~~ third set of information;

3) processing the first and second sets of information ~~and the second set of information~~ with the processor by calculating a first time difference between components of the first and second sets of information and processing the ~~second~~ third set of information and at least one of the first and second sets of information with the processor by calculating a second time difference between components of the third set of information and at least one of the first and second sets of information and comparing the first and second time differences to a mathematical model to calculate a blood pressure value; and

4) wirelessly transmitting the blood pressure value to an external receiver.

25. (Previously Presented) The method of claim 24, further comprising the step of transmitting the blood pressure value to an Internet-accessible computer system.

26. (Previously Presented) The method of claim 24, further comprising the step of transmitting the blood pressure value to a central computer system.